JOURNAL

Vol. 38, No. 5 MAY, 1959

SUPPLEMENT

THE INSTITUTION OF PRODUCTION ENGINEERS, 10 CHESTERFIELD STREET, MAYFAIR, LONDON, W.1

QUALITY IN INDUSTRY

A Conference to be held at The Palace Hotel Buxton

on

Thursday, 18th June,

and

Friday, 19th June, 1959 In view of the constantly increasing competition with which British products are faced, it is more than ever important that United Kingdom manufacturers should be able to offer the greatest value for money.

The aim of this Conference, which is organised jointly by The Institution of Production Engineers, The Institution of Engineering Inspection, and The British Productivity Council, is to show that Control of Quality is the concern of every member of an organisation, and can be introduced at all stages of design and manufacture.

The Conference Papers will cover the field of engineering, woodworking, textile and leather industries, and will deal with the problems of design, planning, manufacture and vending.

Details of the programme together with an application form are given on page 3, and those interested in attending the Conference are advised to book their accommodation NOW. No arrangements for delegates' accommodation can be made by the organisers of the Conference, but a list of hotels in Buxton may be obtained from:

The Conference Secretary,
The Institution of Production Engineers,
10 Chesterfield Street,
Mayfair, London, W.1.

The Conference fee of £5 5s. 0d. is inclusive of light refreshments, Conference Papers, etc.

QUALITY IN INDUSTRY

CONFERENCE PROGRAMME

THURSDAY, 18th JUNE

2.30 p.m. Plenary Session — "What is Quality?".

3.30 p.m. Presentation of Papers.

A. Engineering and Woodworking

1. Design

Speaker: H. G. M. Barnes, Quality Controller, Harris Lebus Ltd.

2. Planning

Speaker: C. E. S. Burgess, Chief Production Engineer, Bristol Aircraft Ltd.

5.00 p.m. Discussion.

B. Textiles and Leather

1. Manufacture

Speaker: L. H. C. Tippett, M.Sc., F.T.I., British Cotton Industry Research Association.

2. Vending

Speaker: To be announced.

Discussion.

9.00 p.m. Conversazione and presentation of a new B.P.C. film: "According to Specification".

FRIDAY, 19th JUNE

9.30 a.m. Presentation of Papers.

C. Engineering and Woodworking

1. Manufacture

Speakers: E. Summerscales, Chief Quality Engineer, Joseph Lucas (Electrical) Ltd.; R. K. Grunau, M.I.Prod.E., Chief Inspector, Rolls-Royce (Oil Engines) Ltd.

2. Vending

Speaker: J. C. Walter, B.S.M.E., Chief Engineer, Cummins Engine Co. Ltd.

11.00 a.m. Discussion.

2.45 p.m. Plenary Session — "Any Questions?".

3.30 p.m.

"Quality and the Future."

D. Textiles and Leather

1. Design

Speaker: C. R. Wilkinson, Director, Howlett & White Ltd. (branch of Norvic Shoe Co. Ltd.).

2. Planning

Speaker: L. Sychrava, M.A., British Boot & Shoe & Allied Trades Association.

Discussion.

Speaker: Sir Frederick Wrisberg, K.B.E., C.B., President of the Institution of Engineering Inspection; Managing Director, Linotype & Machinery Ltd.

LIFE ASSURANCE

THE IMPORTANCE OF PROFESSIONAL ADVICE

HE Welfare Services provide no more than a start to the protection necessary for your family and for your old age, but modern Life Assurance has the flexibility that is needed to give constant protection in changing circumstances.

Apart from providing Life Cover for the protection of your dependants, <u>Life and Endowment Assurance</u> is the best means of providing for:

- 1. A LUMP SUM OR PENSION ON RETIREMENT
- 2. CHILD'S EDUCATION
- 3. House Purchase (either now or in the future)
- 4. ESTATE DUTY
- 5. Superannuation of Employees

Your premiums are invested by experts who have the means to take full advantage of changing market conditions, and what is often overlooked is that if wisely invested your premiums can show an extremely good investment return.

Successive Governments have recognised the value of these savings by allowing relief of income tax on premiums.

The complexity of Life Assurance is not generally appreciated by the layman, who seldom realises, for example,

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that the Life Assurance Market consists of some eighty companies, all transacting business on independent lines.

For similar policies rates of premium may vary by as much as 14%, and bonus distributions differ by even more.

No one company is the best for every type of Policy, and professional advice is essential if you wish to make the most effective use of the advantages of Life Assurance.

There are several other factors to take into consideration: your adviser must consider such points as the widely differing views held by certain Life Offices on the subjects of Occupation, Foreign Residence, Air Travel and Medical Standards. A highly important point is the attitude likely to be taken by your Life Assurance Office should you, through financial hardship or other reason, be unable to keep your policy in full force.

Our Life Department has the skill and experience to ensure that all these factors are related to your circumstances, and if you will kindly fill in and return the attached form you can avail yourself of our professional advice, thus obtaining at an economic premium the best possible policy for your particular requirements. We should like to stress that no charge is made in this connection.

KENNETH BONNER & CO. LIMITED

(Insurance Brokers)
Fenchurch House

5 Fenchurch Street

MANsion House 2622/3

LONDON, E.C.3

"PRO-ENG."-May, 1959

To KENNETH BONNER & CO. LIMITED FENCHURCH HOUSE

MANsion House 265

5 FENCHURCH STREET

LONDON, E.C.3

Please forward (without obligation) details of Life

Assurance in accordance with the following information:

Name Tel. No.

Address

Occupation

Date of Birth Single or Married

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THE INSTITUTION OF PRODUCTION ENGINEERS

THE INSTITUTION OF ENGINEERING INSPECTION

THE BRITISH PRODUCTIVITY COUNCIL

'QUALITY IN INDUSTRY'

Conference - Palace Hotel, Buxton, 18th-19th June, 1959

Conference Fee: £5 5s. 0d.

Please reserve places for the following delegates for which a cheque/postal order is enclosed for : s. d.

(All cheques postal orders should be made payable to the Institution of Production Engineers.)

NAME	ADDRESS FOR CORRESPONDENCE	POSITION
		-
		-
•		

Name of company if not given above		
I shall attend the Papers in Groups (Cross out one group from each box.)	A or B + C or D	*****

Full details of the Conference, including preprints of the Papers to be given, will be circulated in advance.

N.B. — It should be noted that delegates must reserve their own accommodation and a list of hotels can be obtained from:

THE CONFERENCE SECRETARY,
THE INSTITUTION OF PRODUCTION ENGINEERS,
10 CHESTERFIELD STREET,
MAYFAIR, LONDON, W.1.

NORTH **MIDLANDS** REGIONAL CONFERENCE

Communication of Ideas in Production Engineering —Its Importance and **Improvement**

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Venue: The Social Hall, Ericsson Telephones Ltd., Beeston, Nottingham

1959

6th JUNE,

PROGRAMME

9.15 a.m. Registration — Coffee.

9.45 a.m. Civic Welcome by The Lord Mayor of Nottingham. Official Welcome by Regional Chairman.

Delegates and their ladies will be conducted on a visit chosen 10.00 a.m. from the following:-

Party A — The Royal Ordnance Factory, Nottingham.

Party B — Nottingham and District Technical College — Engineering Department.

Party C — Nottingham and District Technical College — Textiles Department.

Party D — Hosiery and Allied Trades Research Establishment, Nottingham.

12.45 p.m. Luncheon.

2.00 p.m. PLENARY SESSIONS:

"The View of the Expert."

Speaker: E. Moonman, Head of Human Relations Department, British Institute of Management.

"The Views of Management and Administration."

Speaker: R. Ratcliffe, M.B.E., B.Sc.(Eng), M.I.Mech.E., M.I.E.E., M.I.Prod.E., Deputy Controller, Royal Ordnance

"The Trade Union View of Their Liaison within the Industrial Structure.'

SUMMARY by J. R. Pollard, M.A., A.M.I.E.E., M.I.R.E., Head

of Communications Research, Ericsson Telephones Ltd.
CLOSING REMARKS by H. W. Bowen, O.B.E., M.I.Prod.E.,
Chairman of Council, The Institution of Production Engineers.

Buffet Tea, followed by informal dance.

promoted by the **Nottingham** Section

AFTERNOON ARRANGEMENT FOR LADIES (2 p.m. to 5.30 p.m.)

Ladies may choose either: (a) coach tour through Sherwood Forest and The Dukeries, visiting Thoresby Hall (home of the Countess Manvers) for a conducted view of the mansion and grounds, also a lace display; or (b) city shopping in Nottingham (not organised individually).

CONFERENCE FEE

Delegates and their ladies £1 1s. 0d. each. Students of The Institution of Production Engineers may attend from 2 p.m. at the reduced fee of 5s. The programme is a full and comprehensive one and all transport arrangements and refreshments are included in the fee.

BOOKING

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Head d.E., ction Please complete and return the application form below, with remittance, not later than 20th May. Cheques should be made payable to "I.Prod.E. — Nottingham Section" and should be crossed. Each booking will be acknowledged, and a copy of the programme and travel details will be forwarded.

To: The Joint Conference Secretaries,
The Institution of Production Engineers,
Royal Ordnance Factory,
Nottingham.

NORTH MIDLANDS REGIONAL CONFERENCE 6th June, 1959

	Please make reservation	ns on my behalf (FULL DAY/F)	ROM 2 p.m.)*	
	I will be accompanied by	(wife, visitor, etc.) (M	(r./Mrs./Miss)*	
	Name (Block Capitals)			
	Honours, Titles, etc		******	
	Address (Block Capitals)			
	Company	Grade of Membership		
	Section of Institution	Telephone No		
	Please state preference for morning visit (A	/ B / C / D)*		
	Please state second preference	(Add note if visitors	choice varies.)	
	Please state preference for Ladies' Afternoon	n Visit (if applicable) (A / B)	*	
	I intend to travel to Beeston by CAR/COA	ACH/RAIL *		
Signed	mittance of £ : :	* Please clearly delete as	appropriate	
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Receipt acknowledged				

Management Staff Education, Selection and Training

Tenth
Annual
Summer
School
ASHORNE HILL
Leamington Spa

Wed.-Sun. 26th-30th August, 1959 The Institution has again been fortunate in securing Ashorne Hill for its 1959 Summer School. This is an ideal conference centre, with a wide range of amenities and excellent accommodation — comfortable single rooms, lounges, a bar, recreational facilities and extensive grounds. It is about four miles from both Warwick and Leamington and easily reached from Birmingham, Wolverhampton, Rugby, Oxford and Coventry.

"The manager of tomorrow will not be able to remain an intuitive manager. He will have to master system and method, will have to conceive patterns and synthesize elements into wholes, will have to formulate general concepts and to apply general principles; otherwise he will fail." This is stated by P. F. Drucker in "The Practice of Management".

Sir Walter Puckey, in his book "What is this Management?", uses more human terms in summarising a few of the requirements in a manager:

"He must be capable of earning respect and of respecting the views of others; of controlling personnel and of co-ordinating departments and individuals (including himself); of distinguishing between opinion and fact; of defining and controlling the policy of a group; must lead and not follow his subordinates; must show results."

Thus to the technical and organising abilities of a manager must be added many personal qualities, particularly those so necessary for the teamwork with which he will be confronted today.

It is the purpose of the 1959 Summer School to enquire how best to educate, select and train the manager of tomorrow — the manager who will measure up to the stringent requirements which all agree are so essential

TENTH ANNUAL SUMMER SCHOOL, 1959

Theme: "Management Staff Education, Selection and Training."

Programme.

This is in the nature of a preliminary announcement and further information about the lectures and lecturers will be given in the June Journal. It will, however, assist the organisers greatly if application forms could be completed and sent to the Institution as soon as possible.

Wednesday, 26th August.

School assembles in late afternoon. Opening Address by Mr. G. R. Pryor, President of the Institution.

Thursday, 27th August

"Education". Lectures will be given by Mr. E. W. Hughes of the Institute of Education, the University of Leicester and Mr. P. B. R. Gibson of Sundridge Park Management Centre.

Friday, 28th August.

"Selection". Lectures by Miss Joan Woodward of The Acton Society Trust and by Mr. P. J. H. Fryer of Management Selection Limited.

Saturday, 29th August.

"Training". Lectures by Mr. J. R. Armstrong of Joseph Lucas Ltd., and Mr. E. R. L. Lewis of The English Electric Co. Ltd.

Sunday, 30th August.

School disperses shortly after breakfast.

After each morning lecture two periods will be available for discussion and a general forum. During these, members of the School will be able to address questions to the Lecturers.

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w best to ager who essential It is hoped on one evening that those who wish can see a play performed at the Shakespeare Memorial Theatre. The other two evenings will be occupied by lectures and/or demonstrations of teaching aids by persons eminent in the field of education and training.

Fees.

The inclusive fee which will cover accommodation, meals, gratuities and School course is:

Members of the Institution £13 13s. 0d.

Non-members £16 16s. 0d.

For those who wish to travel daily and who will not require sleeping accommodation or breakfast the fee is:

Members of the Institution £7 7s. 0d.

Non-members £8 8s. 0d.

(Theatre ticket is an optional extra.)

Detailed joining instructions and a copy of the final programme will be sent to all those attending.

To: The Institution of Production Engineers, 10 Chesterfield Street, Mayfair, London, W.1.

PRODUCTION ENGINEERING SUMMER SCHOOL 1959

Application Form

- I wish to attend the 1959 Production Engineering Summer School from p.m. Wednesday, 26th August, to a.m. Sunday, 30th August, and I enclose remittance (payable to The Institution of Production Engineers)
 for *£13 13s. 0d./*£16 16s. 0d. for full residential attendance.
 for *£7 7s. 0d./* £8 8s. 0d. for daily attendance.
- 2. I *shall/shall not require garage accommodation.
- 3. I *do/do not wish to visit the Stratford Memorial Theatre.

NAME ((block letters)	Membership Grade (if any)
ADDRES	55	
PRESEN	T APPOINTMENT	
ORGAN	ISATION	
(*Delete	where inapplicable)	SIGNED

STANDARDS ENGINEERS' CONFERENCE

This year's all-day Conference of engineers and others concerned with the application of standards in industry, organised by a Joint Committee of The Institution of Production Engineers and the British Standards Institution, will take place on Thursday, 4th June, 1959, starting at 10.30 a.m. It will be held at the Connaught Rooms in London.

Those who intend to participate are advised to make early application for tickets and in any event not later than 21st May. For this purpose a registration form is printed opposite. The ticket includes luncheon at the Connaught Rooms.

THE AGENDA

The Conference will be opened by The Rt. Hon. the Earl of Halsbury, President of The Institution of Production Engineers, and the theme of the morning session will be the economic significance of standards in the national economy, their application in the individual company and the place and function in the company of the Standards Engineer. The discussion will be introduced by speakers from the management side of two different types of firm; this will lead on to consideration of a Paper on the detailed operation of a Company Standards Department — a Paper which it is hoped will be specially helpful to the newly-appointed standards engineer and to companies setting up standards departments.

At the afternoon session speakers from the I.Prod.E. and the B.S.I. will report on the significant trends of their work as it affects standards engineers and a Progress Report will be submitted from the I.Prod.E./B.S.I. Committee on matters that have come before previous Conferences: this will include a review of the opinions expressed since the last question on the question of establishing a formal association of standards engineers. The co-operation between the Standards Design and Purchasing Departments in firms will be discussed with particular reference to making British Standards more readily usable as purchasing specifications.

Time is being allowed for discussion of special topics proposed by participants in the Conference and notified in advance; suggestions should be sent in (to the Secretariat, I.Prod.E./B.S.I. Committee, British Standards House, 2 Park Street, London, W.1) by 1st May if possible.

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SECTION MEETINGS

Visitors Tickets may be obtained from Section Honorary Secretaries

JUNE, 1959

MIDLANDS REGION

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STANDARDS ENGINEERS' CONFERENCE — 4th JUNE, 1959

Tickets: 35s. each

Please complete and return this form to: The Secretariat, I.Prod.E./B.S.I. Committee, British Standards House, 2 Park Street, London, W.1.

Names of Delegates	Position in Organisation
•••••	
Amount of remittance enclosed * £	
(made payable to "The British Standards	•
ORGANISATION	
ADDRESS	
	Signed

* A ticket or tickets will be sent in lieu of receipt.

PRODUCTION APPOINTMENTS

BULLETIN No. 68 MAY 1959

The last date for receiving material for insertion in the following month's bulletin is the 20th of each month, and cancellations cannot be accepted after this date. Correspondence should be addressed to: The Publications Department, The Institution of Production Engineers, 10 Chesterfield Street, Mayfair, London W.1 (Telephone: GROsvenor 5254). The fee for insertion of particulars regarding each appointment is £4 4s. (up to 100 words) and £1 1s. for each additional 100 words or part thereof. The special rate per insertion for firms affiliated to the Institution, technical colleges and universities is £2 2s. for each appointment.

Advertisers are advised that better response is likely if, in addition to essential qualifications, the following information is given:—
(a) Location of appointment; (b) Status in the organisation and scope of promotion; (c) Salary range and age range. Advertisers are asked to advise the Institution when appointments are filled. The Institution reserves the right to refuse or withdraw any announcement and also to make any alteration in the wording to ensure conformity with the Institution standards. Members interested in the following appointments should make application in accordance with the terms of notice. No correspondence can be undertaken by the Secretary other than the forwarding of replies to Box Nos.

Senior Planning Engineer required for the creation of process layouts for electronic equipment. Knowledge of press work essential, and of time study or ratefixing an advantage. Permanent, pensionable position offering excellent prospects. Apply: Airmec Limited, High Wycombe, Bucks.

Technical Editor required by rapidly expanding organisation in the East Midlands. This appointment carries an excellent starting salary and offers considerable scope for development to a man with ability, energy and a wide knowledge of production and mechanical engineering. Excellent superannuation scheme and pleasant surroundings. Send details of career and present salary to: Box No. 1847, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W.1.

Methods Engineer fully experienced Methods Engineer with sound knowledge of ratefixing required, by manufacturers of electrical relays and components. Housing available to married applicant. Address full details of experience and salary required to: Chief Engineer, Besson & Robinson Ltd., Harlow, Essex. Telephone: Harlow 25231.

Production Engineer required, aged about 35 years. Will be required to take charge of Auto Shop and Capstan Shop in small Company employing approximately 100. Applicant should be a qualified Production Engineer, competent to handle production planning and control, etc., and must be a good disciplinarian. Excellent prospects for right type of man, both in status and pay. Starting salary approximately £1,250 per annum. Apply: Box No. 1850, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W.1.

Works Superintendent. Applications are invited for this appointment to our engineering division, which is concerned with the manufacture of "Jones" Mobile Cranes and other heavy engineering projects. Shops include machines, fabrication, paint and assembly with modern plant and equipment. This senior position carries direct responsibility to the General Works Manager and offers an opportunity for the comprehensive application of management techniques. Applicants between 35 and 40 years of age, should have a sound grounding in medium/heavy engineering and have successfully carried managerial responsibility. Associate Membership of the Institution of Mechanical Engineers or Institution of Production Engineers, is desirable. Salary will be £1,700 per annum minimum. There is a contributory pension scheme. Assistance will be given with housing and removal expenses reimbursed. Applications giving a brief outline of career and personal details should be sent, in confidence to: The Personnel Executive, K & L Steelfounders and Engineers Limited, Letchworth, Herts.

Production Study Engineer, aged 25-35, is required by a West Midlands Company in the heavy engineering field. Applicants should be of graduate or equivalent status and should have experience in work study. To an engineer with originality of thought and ability to get on with people, this post offers the opportunity to enlarge his experience. Salary of £1,000 per annum or more according to experience and qualifications, plus contributory pension scheme. Applications giving full details of previous experience will be treated in strict confidence and should be addressed to: Box No. 1846, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W.1.

Design Engineer, University Equipment. Cambridge University Engineering Department has a vacancy for a design engineer to be responsible for designing a wide variety of equipment for teaching and research. Applicants should have extensive and varied experience, high technical qualifications and ability to interpret rough specifications for new equipment. Stipend £1,200-£1,650 depending on age and experience. A non-pensionable allowance of £50 a year is paid for each dependent child who is under the age of sixteen or is in receipt of full-time education. F.S.S.U. pension scheme applies. Applications giving details of age, qualifications and experience should be addressed to: The Secretary of the Appointments Committee, Engineering Laboratory, Cambridge. Closing date 23rd May, 1959

Young Engineers, who have served a recognised apprenticeship and have experience of detailing from design drawings, are required by PERA. The work, on special purpose machine design and product design etc., is varied and interesting and offers an opportunity to engineers with ability and initiative for promotion to design engineer status. Write giving full details concerning experience, qualifications and salary to: The Secretary, Production Engineering Research Association, Melton Mowbray, Leics.

Welding Engineer required for sheet steel and structural steel fabrications for bodywork on commercial vehicles. Higher National Certificate standard in Mechanical, Electrical or Production Engineering is necessary. Applicants who have the ability to improve production methods, introduce jigs and fixtures, and able to take time studies will be preferred. Applications should be in writing giving full details of age, education, qualifications and experience to: The Works Manager, Telehoist Limited, Manor Road, Cheltenham, Glos.

General Manager. A vacancy occurs, in a small company located in the Black Country engaged in structural engineering, for energetic General Manager. Preferred age group 30-40. Salary range £1,000-£1,500 plus bonus and car provided. Excellent prospects for expansion. For further information and application form please contact: Birmingham Productivity Association, Technical Advisory Service Limited, 95 New Street, Birmingham, 2. Telephone: Midland 0912 (quoting Ref. 687/GM).

Senior Jig and Tool Draughtsman, Rapidly expanding Company engaged in the field of light engineering requires a Jig and Tool Draughtsman. The vacancy offers considerable scope and interest and requires knowledge of tool design relating to pressure and gravity casting, compression moulding or press work. The Works are modern and attractively situated with the most up-to-date drawing office equipment. The position is permanent and pensionable, together with good remuneration, and assistance with accommodation can be given. Apply: The Personnel Manager, Woods of Colchester, Ltd., Colchester, Essex.

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Opportunities for Graduates, The Glacier Metal Company Limited. The Company is the largest manufacturer in Europe of plain bearings, its products varying in size from under one ounce to over a quarter of a ton and in quantities from single units to runs up to half a million. Engineering processes are wide and diverse and cover all stages of manufacture from casting to final machining. The Company makes its own special machine tools. Continuous technical development is taking place in this most basic engineering component. There is a large research organisation and Glacier processes are operated under licence all over the world. In addition the Company gives much importance to the development and staffing of a clear organisational structure. To meet the needs for future Managers and Technologists, the following entry schemes are operated for graduates.

Glacier Graduate Apprenticeships. This course has two objectives:-

A practical training in engineering during which the graduate "learns his tools", has actual experience of setting and operating machines, operates production procedures, and covers all kinds of engineering and the principles of workshop practice. Modern activity methods of teaching are used, i.e., to the maximum extent possible graduates carry out the operations they are learning.
 Theoretical training in industrial organisation, within

2. Theoretical training in industrial organisation, within a syllabus based on research carried out by the Company. The course is based on London and normally lasts two years, although graduates making good progress may enter permanent positions in the Company before this time. Salary from £550-£825 per

annum according to qualifications, age and experience. Glacier Management Traineeships. The object of this course is specifically to train men with potentiality for eventually filling senior posts in the Company. It covers some two years of general training, of which a part may be spent abroad. As well as formal training events, the course consists of a number of periods during which trainees carry out actual jobs of work in the main areas of Company activity. Each period is centred around a project during which the trainee is expected to study some particular aspect of the job in hand. Regular career discussions are held with trainees. Entrants should have a good University Degree and should have completed recognised apprenticeship. Salary from £675-£925 per annum according to qualifications, age and experience. Special Assignment Group. This consists of a group of engineers attached to the Chief Production Engineer at Company Headquarters. On entering this group members are deployed to work on special projects chosen to allow the new member to make an immediate impact on the work of the Company. Assignments, which are of great interest and often concern new developments, typically, last for some months each, and may take place in any of the Company's factories in London, Manchester or Glasgow. After spending up to 18 months in this group members are eligible to take up permanent positions in the Company. Salary from £900-£1,350 per annum. To warrant a salary towards the top of this range entrants would be expected to have had some practical experience in addition to the possession of a degree and the completion of an apprenticeship. Selection for all these entry schemes will take into account both academic level, experience and all-round personal qualities. Applications from young men who wish to be considered for one of these appointments should be sent to: The Personnel Director, Glacier Metal Company.

Development Engineer. The Glacier Metal Company Limited, Europe's largest producer of plain bearings, require a Development Engineer for a unit producing thinwall bearings using special purpose transfer machines. The wall bearings using special purpose transfer machines. The engineer will become responsible for developing and modifying existing machines and mechanisms to achieve greater speed, reliability and simplicity. He will have close contact with shop floor problems and will be expected to seek out fundamental solutions in addition to "knife" and "fork" improvisations. He will have access to draughting and central research services. Degree or H.N.C. draughting and central research services. Degree or H.N.C. plus endorsements, Apprenticeship or equivalent experience, preferred age, mid or late twenties. Potential as an engineer and ultimately as a manager is more important than extensive experience with pneumatic, hydraulic and electric circuits, but this would help. Salary £850 - £1,250, probably starting in lower half. Three weeks holiday. Write for application form: Personnel Manager (ref: 1332), The Glacier Metal Company Limited, Ealing Road, Alperton, Wembley, Middlesex.

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ers are w the work nterest of the asgow. ers are npany. salary pected to the pprenround wish. uld be npany Production Engineer required by well established engineering Company situated in the West of Scotland engaged in an expanding programme of work in the light precision, electro-mechanical and structural fields. Applicants, age 35-40, should have a sound fundamental engineering knowledge at least to Higher National Certificate standard with membership of the Institution of Production and/or Mechanical Engineers. They should have a good practical knowledge of basic engineering processes, with experience of planning and supervision, and must be conversant with work study and modern practice in assembly layout and tool design for batch and line production. Processes at present include various welding techniques, precision machinery, press work, structural sheet metal work and associated finishings. Applicants must possess technical initiative, organising ability of a high order, and should now be earning at least £1,250. Initially the successful candidate will operate as Technical Assistant to the General Manager. Early promotion to Production Manager, controlling all dozentraction in the control of the controlling and co candidate will operate as Technical Assistant to the General Manager. Early promotion to Production Manager, controlling all departments, is anticipated for the successful applicant who can accept full responsibility. Contributory Pension and Free Life Assurance Schemes in operation. Applications, giving full particulars of experience and technical qualifications, should be addressed to: Box No. 1848, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W. 1

Jig and Tool Draughtsman, W. H. Allen, Sons & Co. Ltd., Bedford, require for their Production Engineering Department, Jig and Tool Draughtsman. Generous pension scheme and comprehensive amenities. Excellent conditions of employment. Please apply, in writing, stating age, present salary and full details of education, training and experience to: The Personnel Manager.

Designer-Draughtsman required by Leeds manufacturer of small high speed machines. Applicants must have experience in the design and manufacture of small mechanisms. Age group 25-35. Commencing salary according to experience and qualifications, but will not be less than £800 per annum. Staff pension scheme in operation. Write, giving details of education, age, qualifications, experience, etc., to: Chief Draughtsman, Box No. 1849, I.Prod.E., 10 Chesterfield Street, Mayfair, London, W.1.

Methods Development Engineer. An engineer is required for this work in our production engineering department (engineering division) to develop methods in medium/heavy tengineering division) to develop methods in medium/heavy machining, fabrication, fitting and assembly operations. The main product is "Jones" mobile cranes and other production includes various heavy engineering projects. Applicants, up to the age of 40 years, should have a sound engineering training with practical experience in medium/heavy engineering practice and methods together with sound academic qualifications. It will be an advantage to have had some experience in material handling and factory, layout some experience in material handling and factory layout. Salary will be commensurate with the responsibilities attaching to this appointment and the candidate's ability. Applications giving brief personal history and career details, in confidence to: The Personnel Executive, K. & L. Steelfounders & Engineers Ltd., Letchworth, Herts.

EDUCATIONAL APPOINTMENTS

Mid-Warwickshire College of Further Education, Warwick Nid-Warwickshire College of Further Education, Warwick New Road, Leamington Spa.

Lecturer (LM): to take Mechanical Engineering subjects; Lecturer (LP): to take Production Engineering subjects, Applications are invited for appointment to the following posts commencing on 1st September, 1959.

Lecturer (LM) to take Mechanical Engineering subjects to Higher National Certificate level. Candidates should be able Higher National Certificate level. Candidates should be able to offer either strength of materials or theory of machines as a principal subject, together with mathematics. Lecturer (LP) to take Production Engineering subjects to Higher National Certificate and Final C.G.L.I. level. Ability to offer a specialist subject such as press tool or automatic machine work, or metrology would be an advantage. Candidates for these posts should have graduate or equivalent qualifications together with adequate industrial experience and teaching experience. Salary according to the Burnham Technical Scale, subject to an addition of 5%. Lecturer £1,200 by £30 to £1,350. Application forms may be obtained from the Principal and should be returned within two weeks of the date of this advertisement. to offer either strength of materials or theory of machines as

College of Technology, Department of Engineering,

Sheffield, 1.
Senior Lecturer in Production Engineering; Lecturer in Electrical Engineering / Telecommunications and Mathematics. Applications are invited for the following additional mantes. Applications are invited for the following additional posts, which result from developments in the work of the Department following occupation of new College buildings: (a) Senior Lecturer in Production Engineering to teach machine tool theory, metrology and cognate subjects from the new scheme of The Institution of Production Engineers, in the Higher National Certificate course and the sandwich course for Higher National Diploma in Production Engineering to be offered in September, 1959. (b) Lecturer in Electrical Engineering/Telecommunications and Mathematics to teach a selection of subjects in Ordinary and Higher National Certificate courses, Telecommunications course (C. & G. 49) and Electrical Installation Course C. Applicants for these posts should hold graduate or equivalent qualifications, with suitable industrial and teaching experience. Salary scales: For post (a) £1,350 × £50 — £1,350 per annum, plus 5%. For post (b) £1,200 × £30 — £1,350 per annum, plus 5%. Duties to commence on 1st September, 1959. Application forms, obtainable with further particulars from: T. H. Tunn, Director of Education (stamped addressed envelope), at P.O. Box 67, Leopold Street, Sheffield, 1, should be returned within 14 days of the appearance of this advertisement. posts, which result from developments in the work of the

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